

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Currently Amended)** An apparatus comprising:
 - a lens adapted for impantation in an eye of a human patient, the lens having an index of refraction that varies in response to a focusing stimulus;
 - an actuator in communication with said lens for providing said focusing stimulus;
 - a rangefinder for generating~~[, from]~~ a range estimate ~~[[,]]~~ indicative of a relative distance to an object-of-regard; and
 - a controller coupled to said rangefinder and to said actuator for causing said actuator to generate a focusing stimulus on the basis of said range estimate.
2. **(Cancelled)**
3. **(Previously Presented)** The apparatus of claim 1, wherein said lens is adapted for implantation at a location in an eye, said location being selected from the group consisting of:
 - the anterior chamber;
 - the posterior chamber;
 - the lens bag; and
 - the cornea.
4. **(Previously Presented)** The apparatus of claim 1, wherein said lens is adapted for

implantation in an aphakic human patient.

5. **(Previously Presented)** The apparatus of claim 1, wherein said lens is adapted for implantation in a phakic human patient.
6. **(Original)** The apparatus of claim 1, wherein said lens is a foldable lens having a tendency to spring back into an unfolded state.
7. **(Original)** The apparatus of claim 1, wherein said lens comprises a chamber containing nematic liquid crystal.
8. **(Original)** The apparatus of claim 7, wherein said chamber comprises a first planar side and a second planar side opposed to said first planar side, said first and second planar sides being separated by a gap smaller than a separation between a lens bag in an eye and an iris in said eye.
9. **(Cancelled)**
10. **(Original)** The apparatus of claim 1, wherein said actuator comprises a variable voltage source.
11. **(Original)** The apparatus of claim 10, wherein said actuator further comprises an electrode coupled to said variable voltage source and to said lens for applying an electric field within said lens.
- 12.-13. **(Cancelled)**
14. **(Original)** The apparatus of claim 1, wherein said actuator comprises a plurality of actuating elements coupled to different local regions of said lens for selectively varying said index of refraction at said different local regions of said lens.
15. **(Original)** The apparatus of claim 14, wherein each of said local regions of said lens has a local curvature.

16. **(Original)** The apparatus of claim 14, wherein said actuating elements comprise a plurality of electrodes disposed at different portions of said lens.

17-21. **(Cancelled)**

22. **(Currently Amended)** An apparatus comprising:

a lens having an index of refraction that varies in response to a focusing stimulus;

an actuator in communication with said lens for providing said focusing stimulus;

a rangefinder for generating~~[, from]~~ a range estimate~~[[,]]~~ indicative of a relative distance to an object-of-regard, said rangefinder including a transducer for detecting a stimulus from an anatomic structure in an eye, said stimulus being indicative of a range to said object-of-regard; and

a controller coupled to said rangefinder and to said actuator for causing said actuator to generate a focusing stimulus on the basis of said range estimate.

23. **(Previously Presented)** The apparatus of claim 22, wherein said transducer comprises a pressure transducer for detecting contraction of a muscle.

24. **(Previously Presented)** The apparatus of claim 23, wherein said pressure transducer comprises a piezoelectric element that generates a voltage in response to contraction of said muscle.

25-26. **(Cancelled)**

27. **(Original)** The apparatus of claim 1, wherein said rangefinder comprises an autofocus system.

28. **(Original)** The apparatus of claim 27, wherein said autofocus system comprises:

an infrared transmitter for illuminating an object with an infrared beam;

an infrared receiver for receiving a reflected beam from said object, and

a processor coupled to said infrared receiver for estimating a range to said object on the basis of said reflected beam.

29. **(Original)** The apparatus of claim 27, wherein said rangefinder further comprises a feedback loop coupled to said autofocus system.

30. **(Cancelled)**

31. **(Original)** The apparatus of claim 1, further comprising a manual focusing control for enabling a patient to fine tune focusing of said lens.

32-47. **(Cancelled)**

48. **(New)** An apparatus comprising:

an intraocular lens system having a focal length that varies in response to a focusing stimulus;

an actuator in communication with the lens system for providing the focusing stimulus;

a rangefinder for generating a range estimate indicative of a relative distance to an object-of-regard; and

a controller coupled to the rangefinder and to the actuator for causing the actuator to generate a focusing stimulus on the basis of the range estimate.

49. **(New)** The apparatus of claim 48, wherein the lens system comprises an optically transmissive medium having an optical index that varies in response to the focusing stimulus.

50. **(New)** The apparatus of claim 48, wherein the lens system comprises at least two lens elements that move relative to each other in response to the focusing stimulus.

51. (New) The apparatus of claim 48, wherein the lens system comprises a lens element that moves in response to the focusing stimulus.
52. (New) The apparatus of claim 48, wherein the lens system comprises an optically transmissive medium having a surface, at least a portion of which changes shape in response to the focusing stimulus.
53. (New) The apparatus of claim 48, wherein the rangefinder comprises a transducer for receiving a signal indicative of the distance to the object-of-regard.
54. (New) The apparatus of claim 53, wherein the transducer comprises a force transducer.
55. (New) The apparatus of claim 54, wherein the force transducer is configured to be in mechanical communication with an intraocular structure.
56. (New) The apparatus of claim 55, wherein the force transducer is configured to be in mechanical communication with an intraocular structure selected from the group consisting of a zonule, a ciliary muscle, a media rectus muscle, a lens bag, and an iris.
57. (New) The apparatus of claim 55, wherein the rangefinder is configured to detect electrical activity associated with actuation of an intraocular structure.
58. (New) The apparatus of claim 55, wherein the rangefinder comprises an auto focus system.